



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

Clean Air Act Inspection Report

Drafted: September 28, 2022

Finalized: October 5, 2022

EPA Inspector: Tom McCusker, Environmental Engineer, Air Compliance Section /TTM/

EPA Reviewer: Darren Fortescue, Senior Enforcement Coordinator, Air Compliance Section /DEF/

Date of Inspection: September 22, 2022

Facility Name: Trelleborg Coated Systems US, Inc. (d.b.a Lamcotec, Laminating Coating Technologies, Inc. or Trelleborg Monson)

ICIS Air ID#: MA0000002504200856

Facility Location: 152 Bethany Road, Monson, MA 01057

Mailing Address: Same

Disclaimer:

Unless otherwise noted, this report describes conditions at the facility/property as observed by EPA inspector(s), and/or through records provided to and/or information reported to EPA inspector(s) by facility representatives and as understood by the inspector(s). This report may not capture all operations or activities ongoing at the time of the inspection. This report does not make final determinations on potential areas of concern. Nothing in this report affects EPA's authorities under federal statutes and regulations to pursue further investigation or action.

Inspection Attendees:

Name	Title	Organization
Tom McCusker	Clean Air Act Inspector	U.S. EPA
Rick Malo	Plant Manager	Trelleborg
Nicholas Boots	EHS Supervisor	Trelleborg
Gene Parent	Operations Manager	Trelleborg
Ben Maclaren	Process Manager	Trelleborg

Facility/Process Description:

Trelleborg Coated Systems US, Inc. (“Trelleborg-Monson” or “Facility”), located at 152 Bethany Road in Monson, Massachusetts, is primarily engaged in the coating of custom urethane laminated fabrics used in the manufacture of several products including inflatable life vests, automotive components, protective outerwear, inflatable boats, inflatable hospital mattresses, potable water containers, marine gear, and a variety of breathable fabricated items. The coating process entails using knife-over-plate application methods to apply chemical compounds onto a fabric web, which upon coating pass through hot air dryers, maintained between 150 °F and 350 °F to be cured. The cured fabric web is then wound into a roll.

Trelleborg-Monson maintains three coating lines, designated in its Plan Approval Number 1-P-06-011, as C1, C2 and C3. Volatile organic compound (“VOC”) and hazardous air pollutant (“HAP”) containing materials are applied on all three coating lines. The VOC and HAP-laden gas streams from C1 and C2 are captured and directed to a recuperative thermal oxidizer, designated as TO-1, with a maximum flow rate of 10,000 cubic feet per minute (“cfm”), which controls the VOC and HAP emissions. The VOC and HAP-laden gas stream from C3 is captured and directed to a recuperative thermal oxidizer, designated as TO-2, with a maximum flow rate of 16,000 cfm, which controls VOC and HAP emissions. The Facility also maintains a mixing room, whose VOC and HAP-laden gas stream is captured and directed to TO-1.

C1 was installed at the Facility in 1986, upon initial start-up of the facility, C2 was installed in the 1996/97 timeframe, and C3 was installed in 2008. All three coating lines can operate simultaneously, and each has one coating station.

Stack testing was performed on TO-1 on February 7, 2005. The 3-run average of the results from this testing demonstrated that TO-1 was achieving a destruction efficiency of 99.57%. Stack testing was performed on TO-2 on August 9, 2007. The 3-run average of the results from this testing demonstrated that TO-2 was achieving a destruction efficiency of 99.9%.

Trelleborg-Monson maintains four laminating lines that use only heat and pressure for laminating purposes. No VOC-containing materials are used, and no VOCs are emitted from these four laminating lines.

Trelleborg-Monson uses recovered heat from the two recuperative thermal oxidizers to provide its building heat.

Trelleborg-Monson maintains one Kohler natural gas-fired emergency engine that was manufactured in December of 2006. The engine is rated at 41 horsepower.

Trelleborg-Monson has operated at this facility since July 2018. Prior to that time, the facility was known as Laminating Coating Technologies, Inc., dating back to initial start-up in 1986.

Number of Employees and Working Hours:

Trelleborg-Monson currently employs 68 people at this location. The operating hours of the facility vary by department, with coating operations typically running from 9:00 am to 12:00 am, five days per week, 50 to 51 weeks per year (daily start-up of the coating lines usually begins at 6:00 am and it takes until approximately 2:00 am to complete necessary cleanup of the coating lines).

Potentially Applicable Clean Air Act Requirements Reviewed:

- 40 CFR Part 63, Subpart VVVVVV – National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing (Area Sources) (Area Source Chemical Manufacturing NESHAP);
- 40 CFR Part 63, Subpart BBBB BBBB – National Emission Standards for Hazardous Air Pollutants for the Chemical Preparations Industry (Area Sources) (Area Source Chemical Preparations NESHAP);
- 40 CFR Part 63, Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Area Sources: Paints and Allied Products Manufacturing (Area Source Paints and Allied Products NESHAP);
- MassDEP Conditional Approval No. 1-P-06-011 – Amended and Issued on June 11, 2008, for Recuperative Thermal Oxidizers TO-1 and TO-2, Coating Lines C1, C2 and C3 and Coating Mixing Room (Supersedes Plan Approval No. 1-P-96-010).

Previous Enforcement Actions:

A “Detailed Facility Report” from EPA’s Enforcement and Compliance History Online database indicates that there has been no informal and no formal enforcement action taken against Trelleborg-Monson in the past five years.

Opening Conference

Entry

EPA Clean Air Act (“CAA”) Inspector, Tom McCusker, arrived at the Trelleborg-Monson facility at approximately 9:50 am. Mr. McCusker did not note any odors or observe any visible emissions or fugitive emissions coming from the Trelleborg-Monson facility or surrounding areas leading to the facility. Mr. McCusker was met at the facility by Trelleborg representatives Rick Malo, Plant Manager, Nicholas Boots, EH&S Manager, Gene Parent, Operations Manager, and Ben Maclaren, Process Manager. Mr. McCusker showed his credentials to Mr. Malo.

Purpose of Visit

Mr. McCusker indicated that the purpose of the visit was to conduct a CAA inspection. Specifically, Mr. McCusker informed the Trelleborg representatives that he would be asking questions and gathering information regarding the operations conducted at the facility, especially

as they related to the coating and emergency generator operations. As part of the inspection, Mr. McCusker asked several questions regarding Trelleborg-Monson's applicability to the Area Source Chemical Manufacturing NESHAP, the Area Source Chemical Preparation NESHAP, the Area Source Paints and Allied Products NESHAP, and Trelleborg-Monson's Plan Approval No. 1-P-06-011.

Discussion

Mr. McCusker was informed that there have been no recent additions or modifications made at the Facility and that the Facility was in the very preliminary stages of discussing acquiring additional equipment. Mr. Malo said equipment additions being discussed included additional water base coating lines and dryer ovens.

Mr. McCusker asked questions regarding applicability to the Area Source Chemical Manufacturing NESHAP, the Area Source Chemical Preparation NESHAP, and the Area Source Paint and Allied Products NESHAP. According to the Trelleborg representatives, none of these three NESHAP standards apply to the facility because the facility is not operating within applicable NAICS codes and is not using any of the listed target HAPs.

Mr. McCusker was informed that the Facility maintained one Kohler emergency engine that operates on natural gas.

Records Reviewed

Records reviewed by Mr. McCusker for this inspection included the following documents:

- Plan Approval No. 1-P-06-011 regarding the two recuperative thermal oxidizers, three coating lines, and coating mixing room;
- MassDEP inspection report (dated August 21, 2018);
- Trelleborg-Monson calendar years 2017 through 2021 annual reports regarding monthly and 12-month rolling VOC and HAP emissions;
- Natural gas usage report for calendar 2021;
- "As supplied" coating records for the two highest VOC-containing coatings, designated as SA-1496 and SA-1198;
- Solvent usage for calendar year 2021;
- Coating operating hours for calendar year 2021;
- Stack test summary pages for the most recent stack testing conducted on TO-1 and TO-2; and,
- Purchase order date and horsepower rating for the Kohler emergency engine;

Mr. McCusker requested that the facility supply the following information via email after the inspection:

- A coating formulation chart/table that provides the “as applied” coating information for the Facility’s two highest VOC-containing coatings, SA-1496 and SA-1198. Specific information requested for these two coatings is as follows: pounds of VOC emitted per gallon of solids applied, weight percent organic volatiles (lbs VOC/lb of coating), and solids content by volume (gallons of solids/gallon of coating);
- A coating formulation chart/table that provides the “as supplied” VOC content of each coating used by the Facility in the units of “pounds of VOC per gallon of coating”;
- The installation and startup dates of both TO-1 and TO-2;
- When each permanent total enclosure, in its current form, was installed on C1, C2 and C3; and
- A coating formulation chart/table for all coatings that indicates the maximum amount of thinning solvent that can be added to each coating without exceeding the 38.75 pounds of VOC per gallon of solids, as applied, limit found in Plan Approval 1-P-06-011, Provision #8.

Based on the records review, Mr. McCusker noted that it appears that Trelleborg-Monson was not maintaining, for each coating, the solids content on an “as applied” basis, but rather on an “supplied” basis. Mr. McCusker was informed that, at times, “as supplied” coatings are thinned, for viscosity purposes, by adding one to two gallons of solvent per 55-gallon drum of coating. Mr. McCusker noted that Plan Approval 1-P-06-011, Provision 13, in part, requires that the solids content of any coatings used be maintained on an “as applied” basis as a means of documenting that the Facility is meeting Provision 9 of its Plan Approval, which requires that coatings contain no more than 38.75 pounds of VOC per gallon of solids, as applied, before control (the Plan Approval does allow for the use of one coating designated as Saran #7150, which exceeds this “as applied” amount, but Mr. McCusker was informed that this coating has not been used in over ten years).

During the inspection, Mr. McCusker was provided with a Toxic Use Reduction or “TUR” report for calendar year 2021, which he reviewed, that indicates that the Facility’s total solvent usage for this year was 617,128 pounds (this included solvent found in each “as supplied” coating, thinning solvents, and cleanup solvents). Mr. Boots informed Mr. McCusker that the total solvent usage for calendar year 2021 was 654,490 pounds. Subsequent to the inspection, through an email sent to Mr. Malo on September 27, 2022, Mr. McCusker requested information on which was the correct solvent usage amount used in calendar year 2021 and the reason for the discrepancy.

Mr. McCusker reviewed VOC and HAP reports, for calendar years 2017 through 2021, which are sent to MassDEP annually that include the monthly and 12-month rolling VOCs and HAPs emitted from the Facility, after control. Mr. McCusker noted the highest monthly VOC emissions reported for each individual calendar year from 2017 through 2021 were as follows: 2017 = 0.37 tons; 2018 = 0.45 tons; 2019 = 0.36 tons; 2020 = 0.41 tons; and 2021 = 0.36 tons.

Mr. McCusker noted the highest 12-month rolling VOC emissions reported within each individual calendar year from 2017 through 2021 were as follows: 2017 = 3.13 tons; 2018 = 3.67 tons; 2019 = 3.56 tons; 2020 = 3.45 tons; and 2021 = 3.09 tons.

Mr. McCusker noted that Provision #6 of Trelleborg-Monson's Plan Approval 1-P-06-011 limits the Facility's VOC emissions to no more than 16.8 tons on a 12-month rolling basis and to no more than 2.0 tons on a monthly basis.

Mr. McCusker noted the highest monthly HAP emissions reported for each individual calendar year from 2017 through 2021 were as follows: 2017 = 0.37 tons; 2018 = 0.44 tons; 2019 = 0.34 tons; 2020 = 0.39 tons; and 2021 = 0.34 tons. Mr. McCusker noted the highest 12-month rolling HAP emissions reported within each individual calendar year from 2017 through 2021 were as follows: 2017 = 3.06 tons; 2018 = 3.57 tons; 2019 = 3.41 tons; 2020 = 3.28 tons; and 2021 = 2.99 tons.

Mr. McCusker noted that Provision #7 of Trelleborg-Monson's Plan Approval 1-P-06-011 limits the Facility's HAP emissions to no more than 9.9 tons of a single HAP on a 12-month rolling basis and to no more than 1.0 ton of a single HAP on a calendar month basis.

Mr. McCusker noted Trelleborg-Monson's Plan Approval restricts coating operations to 7488 hours per year. Mr. McCusker noted, for calendar year 2021, the Facility reported that all coating hours totaled 9,649 hours; however, Mr. McCusker was informed that the Facility believes the restricted coating hours of 7488 hours are not based on total coating hours for the three coating lines combined but rather based on the one coating line with the most coating hours on each particular day when coating was performed. Using the Facility's method, the calendar year 2021 coating hours were reported to be 4648 hours.

Mr. McCusker reviewed maintenance records for the Kohler emergency engine and found no issues.

Facility Tour

The tour of the facility began with a visit to the Kohler emergency engine. Mr. McCusker observed that the unit was not operating. Mr. McCusker observed that the engine nameplate indicated that the date of manufacture of the engine was December 2006. Mr. McCusker observed that the non-resettable hour meter associated with the engine indicated a total of 477.6 operating hours.

Next, the group visited Coating Lines C1, C2 and C3. Mr. McCusker observed that during the inspection only C1 and C2 were operating. Facility representatives said each of the three coating lines are equipped with an interlock system that shuts the coating operations down on a given line if the combustion temperature of the associated oxidizer goes below 1400 °F, which is the minimum temperature required for coating operation per Plan Approval 1-P-06-011. Facility

representatives said the interlock system for each of the three coating lines employ both an audible and visual alarm to notify personnel once the combustion temperature gets close to 1400 °F. Mr. McCusker observed that each line is equipped with what appears to be a permanent total enclosure that encloses the coating area; however, does not extend beyond the drying ovens where the fabric is cured. Mr. McCusker was informed by Mr. Boots that one to three times per year he uses a Mini Rae 2000 photo ionization detector or PID VOC analyzer to measure the VOC concentration from the back end of each coating line where the fabric web exits the drying/curing ovens to be rewound into rolls. Mr. Boots informed Mr. McCusker that the VOC concentrations measured at the exit to the oven associated with each machine ranges from 2 parts per million (“ppm”) to 7 ppm. Mr. McCusker suggested that the Facility could take monthly readings of the VOC concentration at the backend of each of the three coating lines, where the fabric web exits the ovens, and maintain a logbook of the VOC concentrations measured during each monthly monitoring event.

Mr. McCusker noted that each of the three coating lines is equipped with a Dwyer air velocity monitor to ensure that each enclosure maintains a flow velocity of at least 200 feet per minute (“fpm”) into the enclosure, as required by EPA Method 204 regarding permanent total enclosures. Mr. Boots informed Mr. McCusker that the day prior to his inspection, on September 21, 2022, each of the velocity monitors were calibrated and indicated that the flow velocity into the enclosures for C1, C2 and C3 were 225 fpm, 300 fpm, and 250 fpm, respectively. Mr. Boots and Mr. Maclaren said there is also a velocity monitor associated with the mixing room, which was also calibrated the day before the inspection and was measuring 225 fpm. Mr. Boots and Mr. Maclaren said each of the four air velocity monitors have a normal, high, and low air velocity sensor to indicate whether the air flow velocity into the enclosures is adequate. Mr. McCusker observed that during the inspection, the air velocity monitors for the two operating coating lines, C1 and C2 were operating under “normal” conditions. C3 was not operating during the inspection. Mr. McCusker did not observe the air velocity monitor for the mixing room. Mr. Boots informed Mr. McCusker that the air velocity monitors are calibrated one to three times a year. Mr. McCusker suggested that the Facility calibrate each of the four air velocity monitors on a monthly basis and maintain a logbook of the air velocity readings measured during the monthly calibrations of the monitors.

During the inspection, Mr. McCusker was informed by Trelleborg representatives that C1 was applying a high-solids polymer solution to fabric used to manufacture medical devices for compression therapy at a rate of 12.5 yards per minute and C2 was applying a flame retardant coating to fabric to manufacture life rafts at a rate of 12.5 yards per minute.

During the inspection tour, Mr. McCusker observed the control panels for thermal oxidizers TO-1 and TO-2. TO-1 was operating, and the recorded combustion temperature was 1419 °F. TO-2 was not operating during the inspection since Coating Line C3 was not operating.

Closing Conference

Mr. McCusker reiterated his need for the information described in the Records Reviewed portion of this report.

Mr. McCusker thanked the Trelleborg-Monson representatives for their time.